

GUIDE TO THE GENERA OF LIANAS AND CLIMBING PLANTS IN THE NEOTROPICS

ALSTROEMERIACEAE

By Mark T. Strong (16 Jun 2017)



Bomarea edulis (Tussac) Herb. (photo: P. Acevedo)

A family of 4 genera and about 200 species that occur in Mexico, Central America, West Indies, South America, New Zealand, and Australia (including Tasmania). Climbing herbs in the Alstroemeriaceae are restricted to the genus *Bomarea* which over its native range, occurs strictly in the

Neotropics. A few are cultivated and introduced elsewhere. Out of a total 127 taxa of *Bomarea* in the Neotropics, 115 have been recorded as climbing. They generally occur at higher elevations (1500-3000 m) but are found as low as 200 m, in a variety of habitats including cloud forest, paramo, rocky areas, mountain slopes, forest openings, grasslands, secondary vegetation, along roadsides and edges of disturbed forest.

Diagnostics: In the absence of fertile material, climbing *Bomarea* species can be distinguished from vines in other families by a combination of: Roots with tubers, stems twining, tortuous, ribbed and sulcate, and leaf blades lacking sheaths that are spirally arranged, ovate-lanceolate to linear, generally finely parallel-veined, often with cross veins, and resupinate or semiresupinate (the petioles twisted, bearing upside down blades).

General Characters

1. **ROOTS.** Roots forming tubers.
2. **STEMS.** Stems herbaceous, thin, ribbed and sulcate, and tortuous.
3. **CLIMBING MECHANISM.** Twining or scandent herbs.
4. **LEAVES.** Leaves simple, spirally arranged, lack sheaths, and are resupinate or semiresupinate (petioles twisted, bearing upside down blades).
5. **INFLORESCENCES.** Inflorescence pendant, a simple or compound umbel.
6. **FLOWERS.** Flowers pendant, showy, red, pink, orange or yellow, rarely greenish.
7. **FRUITS.** Fruits valvate, many-seeded capsules, sometimes berry-like.
8. **SEEDS.** Seeds numerous, spherical, covered with a juicy orange-red sarcotesta.

USES

Some species of *Bomarea*, most notably *Bomarea dulcis* (Hook.) Beauv. and *Bomarea edulis* (Tussac) Herb., are often cultivated for their edible tubers and sweet sarcotesta surrounding the seeds. The showy inflorescences are often harvested for ornamental purposes and antioxidant potential of some species has been investigated.

GENERIC DESCRIPTION

BOMAREA Mirbel, Hist. Nat. Pl. 9: 71. 1804.



B. formosissima (R. & P.) Herb. (photo: P. Acevedo)

Perennial herbs, rhizomatous, often forming tubers for water and carbohydrate storage. Stems herbaceous, twining or less often scandent, prostrate or sometimes erect, sub-rounded to obtusely angled, ribbed and sulcate, often tortuous. Leaves simple, spirally arranged, resupinate or semi-resupinate, the blades ovate-lanceolate to linear-lanceolate, finely parallel-veined, often with cross veins. Inflorescences umbellate, simple or compound; bracteoles lateral or absent. Flowers actinomorphic or somewhat zygomorphic, campanulate, the corolla funnelform or tubular, perianth segments (tepals) free, red, pink, orange or yellow, rarely

greenish, the lowermost often mottled brown adaxially; stamens 6; style 1, 3-lobed at apex; ovary semi-inferior, 3-locular, placentation parietal, ovules many per locule. Fruit a semifleshy or leathery, trigonous, valvate capsule, sometimes berry-like; seeds many, globose, red or orange, with a fleshy sarcotesta.

Unique features: Resupinate leaves (petioles twisted bearing upside-down blades).

Distribution: 127 taxa distributed in Mexico, Central America, and South America (often above 1500 m elev.), 115 of which are known to be climbers.

RELEVANT LITERATURE

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